

PROCEEDINGS
OF THE
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NEW TREES AND SHRUBS FROM MEXICO AND
GUATEMALA.

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The following new species of woody plants from Mexico and Guatemala have been found in the course of recent work in the United States National Herbarium.

Capparis hexandra Blake, sp. nov.

Tree, strictly glabrous throughout; leaves alternate; stipules triangular, corneous, deciduous, 1.5 mm. long; petioles sulcate, 1 to 1.3 cm. long; blades obovate-oval, 5.5 to 6.7 cm. long, 1.8 to 3 cm. wide, obtuse or broadly rounded at apex, apiculate, at base cuneate or rounded-cuneate, coriaceous, entire, at maturity rather pale green both sides and slightly shining above, the costa sulcate above, the lateral veins 5 to 8 pairs, prominulous on both sides, the secondaries obscure or slightly prominulous; flowers solitary in the axils of the upper leaves, "yellow and white, fragrant;" pedicels 18 mm. long; sepals 4, 2-seriate, imbricated, subherbaceous with thin margins, green, rounded, the outer minutely but distinctly apiculate, the inner obscurely so, deciduous, about 11 mm. long and 6 mm. wide, the inner exceeding the outer by about 2 mm.; petals 4, spatulate-ob lanceolate, 3.5 cm. long, 9 mm. wide, rounded at apex, the claw somewhat dilated at base; glands 4, ovoid-triangular, 2 mm. high, alternating with the petals and exterior to them; stamens 6, free, the filaments 3.4 cm. long; thecaphore 3.8 cm. long; ovary 2-celled, the ovules in 2 rows of about 10 each in each cell; fruit not known.

Type in the U. S. National Herbarium, no. 989693, collected at Finca Capetillo, near Antigua, Guatemala, at an altitude of 1525 meters, December 4, 1919, by Wilson Popenoe (no. 875).

This plant is of some interest as an addition to the comparatively small number of species of *Capparis* with a definite number of stamens known from America. It is closely related to *Capparis heydeana* Donn. Sm., also known only from Guatemala, but may easily be distinguished by its much smaller very obtuse leaves and considerably smaller strictly solitary and axillary flowers. The tree from which the type specimen was

collected was found by Mr. Popenoe growing in volcanic loam in a dooryard at Finca Capetillo.

***Jatropha sympetala* Standl. & Blake, sp. nov.**

"Tree with milky sap;" branch stout, subquadangular, grayish-fuscescent, glabrate; young branchlet green, angulate, sparsely ascending-hispidulous; leaves alternate, crowded at base of young branchlet, the blades obovate, 7 to 9 cm. long, 3.5 to 5 cm. wide, strictly entire, obtusely apiculate or emarginulate at the broadly rounded apex, cuneate-narrowed at base, thin, feather-veined with 6 or 7 pairs of scarcely prominulous lateral veins and obscure translucent anastomosing secondaries, punctate, above light green, glabrous, beneath glaucescent and very densely papillose over whole surface; petioles slender, unmarginated, 1 to 1.5 cm. long; staminate panicles shorter than leaves, several at base of young growth, densely papillose-hispidulous, the peduncles 3 to 4.5 cm. long, many times dichotomously divided toward apex, the flowers crowded on the ultimate branchlets; pedicels 2 to 3 mm. long; calyx 5-parted nearly to base, 1.2 mm. long, the segments oval, broadly rounded, ciliate and dorsally pubescent; corolla "red," ellipsoid-ovoid, obtuse, 8 mm. long, the 5 lobes oval, rounded, only 1.5 mm. long, densely cinereous-puberulous outside, the tube glabrous; discal glands 5, free, ovoid, dark-colored, 1 mm. long, with narrowed somewhat spreading apex; stamens 10, in two whorls of 5, the 5 shorter with filaments united nearly half their length, the 5 longer 6 mm. long, their filaments united about $\frac{2}{5}$ their length; pistillate flowers and fruit unknown.

Type in the U. S. National Herbarium, no. 988581, collected at Playa de Coyula, Oaxaca, Mexico, June 13, 1919, by B. P. Reko (no. 350).

Jatropha sympetala belongs to the subsection Canescentes of the section Mozinna as the genus is divided in Pax's monograph, and is easily distinguished from any species of that section by its obovate not cordate leaves. Its vernacular name is given as "piñoncillo."

***Guarea obtusata* Blake, sp. nov.**

Tree; branchlet with light-colored pustulate-lenticellate bark, strigose and strigillose; leaves abruptly pinnate, the leaflets 2 to 4 pairs; petiole subterete, hispidulous-strigillose, glabrescent, 3.5 to 4 cm. long; rachis similar, grooved above, 5 to 15 cm. long; leaflets opposite, on petiolules 4 mm. long, the upper elliptic-oblong or somewhat obovate-oblong, 14 to 17 cm. long, 4.5 to 7 cm. wide, broadly rounded at apex, cuneate and inequilateral at base, pergamentaceous, entire, equally green both sides, glabrous above, beneath sordid-barbate in the axils of the 6 to 8 pairs of prominent veins, otherwise glabrous, the secondaries and tertiaries prominulous-reticulate; lower leaflets similar but somewhat smaller, about 9 to 11 cm. long; panicles axillary on the wood of the year, 3 to 4.5 cm. long, bifid from the base, hispidulous-strigillose, rather dense; cymules mostly 3-flowered; pedicels stout, 3 to 5 mm. long, essentially glabrous; flowers "white with pink tinge, very fragrant;" calyx saucer-shaped, about 1.5

mm. high, 4 to 5 mm. wide, 4-lobed for half its length or less, the lobes suborbicular or suborbicular-ovate, apiculate, incurved-puberulous toward margin; petals 4 or rarely 5, valvate, oblong, 8.5 mm. long, 3 mm. wide, obtuse or acutish, densely papillose-puberulous outside; staminal tube 7.5 mm. long, equaling the pistil, glabrous; anthers 8, sessile, oblong-oval, blunt, 1.2 mm. long; pistil glabrous; disk 1.5 mm. high, thickened above; ovary ovoid-subglobose, 2 mm. long, 4-celled, the ovules solitary; style 4 mm. long, stout, striate, minutely papillose; stigma discoid, 1.6 mm. wide; fruit brown, subglobose, 2.7 cm. long; seeds chocolate-brown, 1.5 cm. long.

Type in the U. S. National Herbarium, no. 887785, collected at Cafetal Concordia (Cerro Espino), Oaxaca, Mexico, altitude 600 meters, December 24, 1917, by B. P. Reko (no. 3701).

Guarea obtusata belongs to the section *Euguræa*, and may be distinguished by its round-tipped leaflets and very short panicles.

Russelia obtusata Blake, sp. nov.

Suffrutescent below, with a creeping base, the erect stems about 0.5 meter high, oppositely branched or simple, stout, 5 mm. thick below, pale green, 6 or 8-angled, densely and minutely spreading-puberulous; leaves whorled in threes or fours; petioles slender, densely spreading- or incurved-puberulous, 2 to 4 mm. long; blades oval or somewhat obovate-oval or suborbicular, or the uppermost rarely ovate, 1 to 3 cm. long, 8 to 18 mm. wide, obtuse or rounded, at base broadly rounded to cuneate, crenate-serrate with 4 to 8 pairs of acute or obtuse teeth, papery or pergamentaceous, above deep green, sparsely incurved-hispidulous, beneath paler green, sparsely incurved-hispidulous along the costa and 3 or 4 pairs of prominulous veins, glabrate, impressed-punctate; lower bracts leafy, the upper very small; internodes of inflorescence 1 to 2.5 cm. long; peduncles 3 to 5-flowered, 4 mm. long to almost obsolete, sometimes produced into short 2-jointed branches 1.5 cm. long, bearing flowers at each node; pedicels 1.5 to (fruit) 6 mm. long, densely and finely spreading-puberulent; calyx 2.5 mm. long, 5-parted, the segments oval-ovate or ovate, from obtuse or abruptly short-pointed to acuminate but not subulate-attenuate, not striate, glabrous or slightly hispidulous along midline, thick and herbaceous, with rosy margins; corolla scarlet, 13 to 16 mm. long, glabrous outside, inside pilose with few-celled hairs between the bases of the stamens, pilose along the ventral side within with 1-celled hairs and stipitate-glandular, the upper lip emarginate, the lower equal, its 3 lobes oblate-suborbicular, crenulate, 2 mm. long, 3 mm. wide; staminode 1.3 mm. long; capsule subglobose, about 4 mm. thick, tipped with the persistent style, this about 7 mm. long.

Type in the U. S. National Herbarium, no. 453525, collected near Tehuacan, Puebla, Mexico, August 30 to September 8, 1905, by J. N. Rose, J. H. Painter & J. S. Rose (no. 10026).

OTHER SPECIMENS EXAMINED:

PUEBLA: Vicinity of San Luis Tultitlanapa, June, 1908, *Purpus* 3270. Chiltepin, near San Luis Tultitlanapa, April, 1908, *Purpus* 3270a.

OAXACA: Valley of Oaxaca, altitude 1525 to 1615 meters, September 20, 1894, *Nelson* 1293.

Russelia obtusata seems to be most nearly allied to *R. cuneata* Robinson, but that species has a 4-angled glabrous and furfuraceous stem, striate fruiting sepals, and other differences.

Russelia tetraptera Blake, sp. nov.

Frutescent; stem elongate, 4 mm. thick, oppositely branched, gray-green, puberulous and sometimes hispidulous, glabrescent, sharply quadrangular, flat or concave between the angles, the angles with corky-margined wings 1 mm. wide or less, reduced above to mere corky margins; leaves opposite; petioles puberulous, 3 to 7 mm. long; blades ovate, those of the main leaves 2.5 to 6.5 cm. long, 2 to 5 cm. wide, obtuse or acutish, truncate-rounded or slightly cordate at base, thin, crenate-serrate or dentate with rounded or acute teeth, above deep green, sparsely incurved-hispidulous or glabrescent, beneath scarcely paler, sparsely incurved-hispidulous along the 3 or 4 pairs of prominulous veins, and dotted with saucer-shaped glands; cymes axillary, many flowered, spreading-hispidulous with slightly curved hairs, 1.8 to 7 cm. wide, the lower leafy-bracted, the uppermost with reduced bracts, the lower internodes 5 to 7 cm. long; peduncles 2 to 5 mm. long; pedicels 1.5 to (fruit) 5 mm. long; calyx 3 to 3.5 mm. long, the five sepals ovate, green, pale-margined, 1 to 5-ribbed, sparsely hispidulous along costa, narrowed into a usually shorter filiform-subulate tip; corolla scarlet, 11 mm. long, glabrous outside, pubescent inside with 1-celled hairs at base of stamens and along the ventral side, the upper lip emarginate, the lower longer, 3-lobed, the lobes essentially equal, oblong-ovate, rounded, 2 mm. long; staminode present, 0.6 mm. long; capsule subglobose, olive-green, glabrous, 3.5 mm. in diameter, tipped with the persistent style, this 6 mm. long.

Type in the U. S. National Herbarium, no. 305142, collected at Tepic, Territory of Tepic, Mexico, January 5 to February 6, 1892, by Edward Palmer.

OTHER SPECIMENS EXAMINED:

TEPIC: Moist ravine, vicinity of Acaponeta, April 10, 1910, *Rose, Standley & Russell* 14313.

This species may be distinguished readily by its puberulous narrowly 4-winged stem and by the dimensions of its flowers.